



Everything You Need to Know About DOCSIS 3.0

Moving Cable to the Future

Cable operators are moving from a traditional business of providing entertainment programming to providing full-service video, voice and data telecommunications services.

The research firm Pike & Fischer estimates that roughly 13 percent of homes passed by cable networks were also passed by DOCSIS 3.0 at the end of 2008 (15 million of 120 million). Analysis projects that cable operators will increase that number to 53 million in 2009 and to 119 million by 2013.

DOCSIS 3.0 succeeds CableLabs' previous three specifications.

DOCSIS 3.0 assists in making the transformation cost-effectively possible. DOCSIS 3.0 is CableLabs' latest set of specifications for a state-of-the-art IP transport that empowers experience-based services.

Paving for the Way for DOCSIS 3.0

DOCSIS 1.0

- Made the interoperability of cable technology possible
- Standardized cable modems to reduce costs from \$500 to \$50

DOCSIS 1.1

- Allowed cable operators to make configuration guarantees on the data rates and/or latency of service

DOCSIS 2.0

- Increased upstream throughput to 30 Mbps

DOCSIS 3.0

- Lowers costs
- Increases bandwidth and speed
- Support for IPv6 and IPTV
- Enhances security
- Enhances Network Management

Lower Costs for Operators and Consumers

CableLabs does not supply modems in order to deploy the specification. Because of this, compatible products can be quickly sourced from multiple vendors at competitive prices.

Backwards compatibility was built into each new revision of the DOCSIS specification, allowing continued utilization of the existing infrastructure. For instance, DOCSIS 1.0, 1.1, 2.0, and 3.0 can all be provisioned and run simultaneously.

Subscribers will reap the benefits of low deployment costs. The cost of accessing broadband will be lowered.

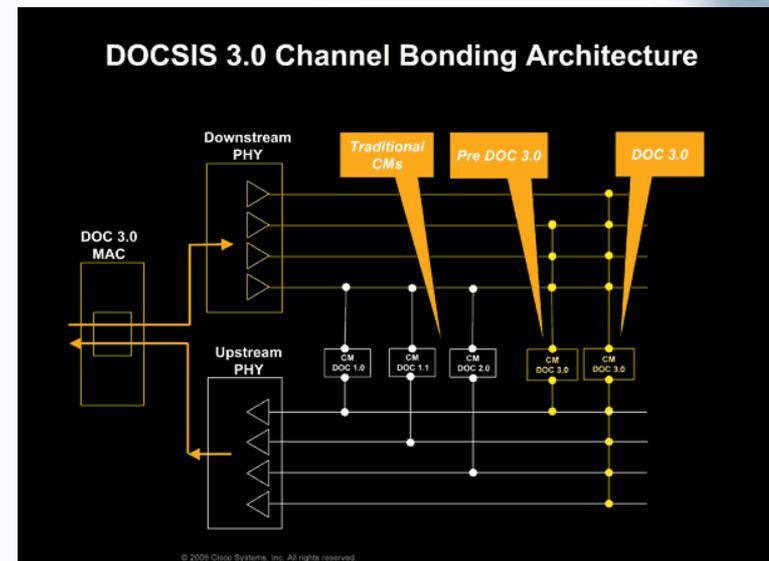


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The Need for Speed

Channel Bonding: The load-sharing technique of DOCSIS 3.0 logically combines multiple DOCSIS channels both downstream and upstream to deliver greater bandwidth at lower costs.

Channel bonding allows cable operators to increase downstream speeds to in increments of 40 Mbps and upstream speeds in increments of 30 Mbps.



Supporting Next Generation Services

DOCSIS 3.0 supports IPv6. Designed to increase Internet global address space, IPv6 will accommodate the rapidly increasing number of users and applications that require unique global IP addresses.

DOCSIS 3.0 enables source-specific multicast (SSM) and Internet group management protocol version 3 (IGMPv3) support, which allows the provisioning and management of multicast session with quality of service (QoS) guarantees.

Keeping cable competitive with telcos' VDSL and FTTx, DOCSIS 3.0 supports a platform for the evolution of the cable video business into IPTV.



Enhanced Security

Security features provided by DOCSIS 3.0 prevent hackers from accessing provisioning servers, disrupting the network and stealing services.

DOCSIS 3.0 supports the 128 bit Advanced Encryption Standard (AES).

Additional security features include:

- Early authentication and encryption
- Configuration file enforcement
- IP address verification
- Certification revocation increases security of the provisioning process



Enhanced Network Management

Cable modem diagnostic log allows CMTS to monitor for and report cable modems experiencing connectivity problems.



Enhanced signal quality monitoring measures noise and interference in the plant. Service Statistics reporting is a streaming mechanism to report service stats from the CMTS.

We Can Help.

More network operators choose CCI because of the high value they receive from the firm's exclusive Custom Solution Engineering approach.

This creative engineering service identifies your optimum solution—one that satisfies your three highest priorities: performance, cost and future upgrade flexibility.

CCI is one of the only firms to offer a truly integrated end-to-end service solution including engineering, construction, and maintenance/support.

CCI has been providing these services for more than 50 years.

Whether your project is small and simple, or large and complex, CCI has the expertise and experience to consistently deliver on your highest priorities.



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